Proposed Plan for Installation Restoration Site 1
Naval Fuel Depot Point Molate
Richmond, California

NAVFAC Naval Facilities Engineering Command SOUTHWEST DIVISION

July 2004

What's Inside

Your Comments Make a Difference…

Public participation is a very important part of the cleanup process and will influence the method selected at Site 1. There are many opportunities for public involvement. Dates to remember are shown below and on Page 7.

Dates to Remember

Public Comment Period:

July 21, 2004 until Aug 20, 2004

Public Meeting: August 4, 2004, 6PM

To be held at:

Richmond Public Library
325 Civic Center Plaza
Richmond, California 94804
(510) 620-6561

The U.S. Department of the Navy (Navy) invites you to comment on the Proposed Plan for Installation Restoration Site 1 at Naval Fuel Depot (NFD) Point Molate, in Richmond, California (Figure 1). The Proposed Plan explains the Navy's recommended approach to cleanup of the former waste disposal area known as Site 1 by (1) monitoring groundwater and methane produced by waste material, (2) maintaining and protecting soil cover and vegetation, and (3) collecting and treating groundwater seepage which periodically flows from the downslope side of Site 1.

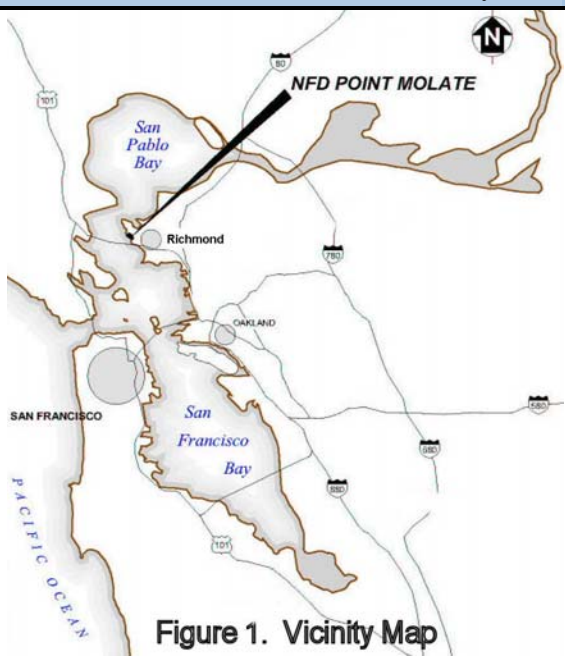

Figure 1. Vicinity Map

The community has an opportunity to comment on the Proposed Plan, as required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Proposed Plan describes site history, environmental studies, past environmental cleanup activities, and how the recommended action will protect human health and the environment. After the Navy responds to community comments, the selected remedial alternative and response to public comments will be documented in a Record of Decision (ROD). The Navy will then complete the Remedial Design (RD) and Remedial Action (RA). Additional information regarding Site 1 may be found in numerous documents, all of which are summarized in a Feasibility Study (FS) for Site 1. The FS and other site documents are available at the information repositories, located at the Richmond Public Library and the Richmond Redevelopment Agency.

In a consulting role for the Navy, representatives of the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, have been coordinating and overseeing environmental cleanup activities at NFD Point Molate. The RWQCB and the Navy form the Base Realignment and Closure (BRAC) Cleanup Team (BCT). The Navy, while seeking state concurrence, will select the remedial action alternative.

SITE INFORMATION

NFD Point Molate is a former Navy fuel storage and transfer facility covering 413 acres on the northeastern shore of San Francisco Bay on the San Pablo Peninsula (Figure 1). NFD Point Molate is bordered to the north, south, and east by the ChevronTexaco Refinery and to the west by the San Francisco Bay.

Site 1 at NFD Point Molate is located in a steep-sided ravine near the center of the facility. Site 1 is approximately one acre in size and is bounded on the north, east, and west by steep slopes and on the south by a low lying wetlands area (Figure 2). Waste disposal at Site 1 began

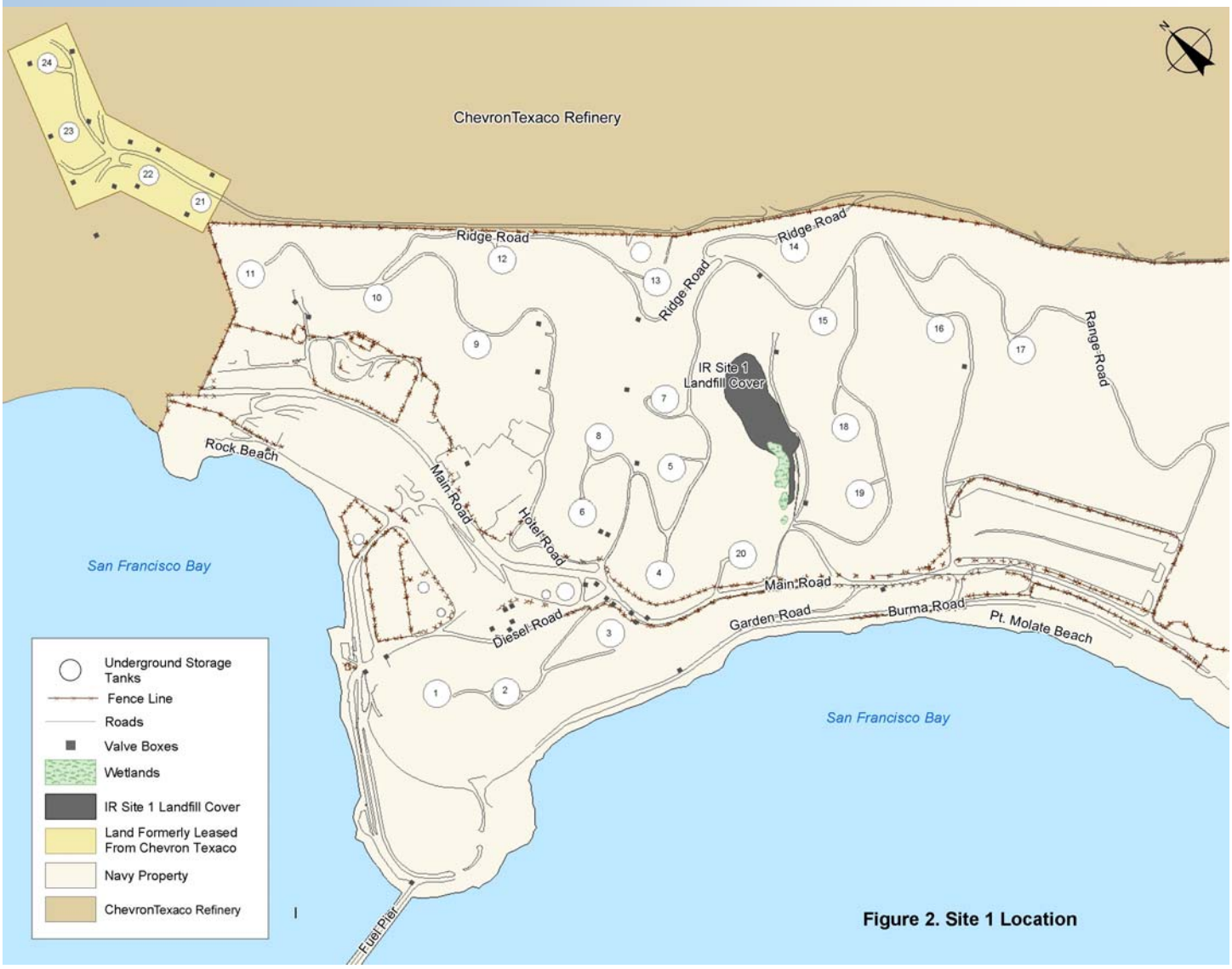

Figure 2. Site 1 Location

between 1953 and 1957 and ceased by 1979. The estimated volume of fill is 20,000 cubic yards. This fill includes the waste and soil cover placed while Site 1 was still active. The waste discarded at Site 1 was primarily construction debris. Although no garbage (household and food wastes) was found at the site and there is no documentation of disposal of household waste, it is likely that some garbage is present. Debris found at the site includes railroad ties and rails, wood, demolition debris from burned buildings, concrete, stumps, logs, pilings, small-diameter pipe, metal strapping, paper, creosote treated wood, burned wood, and an empty rusted 55-gallon drum. The waste material produces some methane gas naturally, as confirmed by detections of methane while monitoring the site. Some oily waste, thought to be petroleum sludge from tank bottoms or petroleum-impacted soil from cleaning of fuel pipeline valve boxes, has also been observed. In addition to oily waste, historical fuel leaks and spills from the underground storage tank (UST) system at NFD Point Molate have affected soil and groundwater around Site 1.

PREVIOUS ACTIONS

Numerous investigations have been conducted within the ravine where Site 1 is located. Investigations were conducted to evaluate Site 1 and the adjacent USTs, pipelines, and valve boxes in the fuel distribution system. A soil cover, seep collection drain, and four methane vents were constructed at Site 1 to prevent waste materials from being exposed at the surface of the landfill and to prevent the migration of petroleum-affected groundwater and methane gas away from Site 1. The seep collection drain collects groundwater from the area around the landfill and discharges it into the wetland

area. An oil/water separator (OWS) was placed at the downgradient end of the seep collection system to remove fuel products from the discharged water. The presence or movement of methane or impacted groundwater is monitored by three soil-gas monitoring wells and six groundwater monitoring wells.

ENVIRONMENTAL IMPACT

The disposal of waste at Site 1 has impacted groundwater and soil. Additionally, fuel leaks and spills from valve boxes and a fuel storage tank located upgradient of the site have impacted soil and groundwater in the ravine that underlies Site 1. Petroleum products have impacted the soil at Site 1, therefore clean fill was placed on the site during the construction of the soil cover in order to prevent direct contract with this soil.

Petroleum products have also been detected in groundwater at Site 1. The potential for future movement of impacted groundwater away from Site 1 has been limited by placement of a soil cap and engineering controls. The soil cap reduces the amount of water infiltrating through the waste into groundwater; engineering controls consist of a seep collection drain and the OWS. The seep collection drain collects groundwater from the area around the landfill; the OWS removes visible fuel product from the water being discharged from the seep collection drain into the wetlands. The OWS removes fuel product that either floats or sinks in water, but may not remove fuel that is emulsified or dissolved in the seep water.

Current condition of the Site 1 landfill

Methane gas is being produced in the landfill at relatively low concentrations. The production of methane gas is the normal product of the decomposition of waste in landfills. Venting wells are being used to minimize the accumulation of methane under the soil cap.

REMEDIAL ACTION OBJECTIVES

The extent of cleanup required for a RA is defined through Remedial Action Objectives (RAO). The RAOs for Site 1 are:

- To prevent direct human contact with the waste by maintaining and protecting the landfill cover.
- To prevent petroleum-affected groundwater from affecting the environment.

IDENTIFICATION AND DESCRIPTION OF REMEDIAL ACTION ALTERNATIVES

RA alternatives considered for this site were selected from an initial list of potential technologies to be used at Site 1. The alternatives selected are:

- **Alternative 1** – no action.
- **Alternative 2** – continued implementation of maintenance and monitoring activities, and implementation of institutional controls (IC).
- **Alternative 3** – continued implementation of maintenance and monitoring activities, implementation of ICs, and engineering controls for the water coming out of the OWS.

Alternative 1 is required as part of the remedial screening process and provides a baseline for comparing all other alternatives. Under this alternative, no action would be taken to alter or maintain the existing landfill.

Alternative 2 would maintain the effectiveness of the soil cover through landfill maintenance and monitoring and the use of ICs to prevent activities that could expose waste or groundwater. Under this alternative, activities would include inspection and maintenance of the soil cover, drainage system, and methane-gas venting; and use of an OWS to remove petroleum products from groundwater at the site, when present. The groundwater and the water coming out of the OWS would continue to be monitored until compounds are no longer detected or are detected below action level concentrations. In addition, ICs would be implemented to protect the soil cover, prevent a change in land use designation from recreational open space, and prohibit the use of groundwater. ICs are legal controls such as deed restrictions and zoning laws that restrict certain activities at the site. For example, digging in the area of the landfill would be prohibited or use of the area for residential housing.

Alternative 3 includes all activities listed in **Alternative 2** plus the use of a filtration system to remove any emulsified or dissolved petroleum in the water coming out of the OWS and further protect humans and the environment from potential exposure to petroleum compounds.

COMPARATIVE EVALUATION OF THE ALTERNATIVES

CERCLA requires that a RA must be compared against nine criteria. For any alternative to be considered, it must meet the two threshold criteria: (1) overall protection of human health and the environment; and (2) compliance with Applicable or Relevant and Appropriate Requirements (ARAR). ARARs are federal or state laws that pertain to the site and the alternative. After comparison to the threshold criteria, seven additional criteria are used to compare differences. All nine criteria are described below.

1. Overall Protection of Human Health and the Environment (threshold criterion 1) - assesses whether each alternative provides adequate protection of human health and the environment. Protectiveness focuses on how site risks are reduced or eliminated by each alternative.

- **Alternative 1** does not protect human health because it does not monitor the groundwater contaminant concentrations and methane emissions from the landfill. It also does not monitor or ensure the quality of the water discharging from the OWS. Further, this alternative does not prevent the change in land use designation, ensure maintenance of the soil cover, or prohibit the use of groundwater.
- **Alternative 2** maintains the effectiveness of the soil cover through maintenance and ICs, and monitors the groundwater, the water coming out of the OWS, and methane. This alternative also prevents a change in the land use designation from recreational open space, and prohibits use of groundwater. This alternative does not protect human and the environment from potential exposure to petroleum in the water discharged from the OWS to the wetlands.
- **Alternative 3** maintains the effectiveness of the soil cover through maintenance and ICs, and monitors the groundwater, the water coming out of the OWS, and methane. This alternative also prevents a change in the land use designation from recreational open space, and prohibits use of groundwater. Additionally, a filtration system would reduce concentrations of dissolved petroleum in the water coming out of the OWS, thereby protecting humans and the environment from potential exposure to petroleum in the water, and maintaining the quality of the wetlands.

2. Compliance with ARARs (threshold criterion 2) - evaluates whether each alternative will meet all of the federal and state regulatory compliance requirements.

- **Alternative 1** does not comply with ARARs associated with landfill maintenance and monitoring or wetland protection.
- **Alternative 2** does not protect the wetlands area from destruction, loss, or degradation by dissolved or emulsified petroleum.
- **Alternative 3** would fulfill the ARARs for the site. It would prevent petroleum-impacted water from affecting the wetlands.

3. Long-Term Permanence and Effectiveness - focuses on the permanence, extent, and effectiveness of the alternative in maintaining protection of human health and the environment after RAOs are met.

- **Alternative 1** does not provide long-term effectiveness because this alternative does not maintain the soil cover through ICs and landfill maintenance, monitor the groundwater and methane concentrations, or prohibit the use of groundwater. This alternative does not protect receptors from potential exposure to petroleum in the water discharged from the OWS to the wetlands.
- **Alternative 2** would protect human health and the environment from exposure to the groundwater and waste by maintaining and monitoring the landfill cap and prohibiting activities that would disturb the landfill. This alternative does not protect potential site workers or the environment from exposure to petroleum in the water discharged from the OWS to the wetlands.
- **Alternative 3** would protect human health and the environment from exposure to the groundwater and waste by maintaining and monitoring the landfill cap and prohibiting activities that would disturb the landfill. This alternative would protect potential site workers and the environment from exposure to petroleum in the water coming out of the OWS by removing the dissolved or emulsified petroleum.

4. Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment - addresses the preference for treatment options that permanently and significantly reduce toxicity, mobility, or volume of the contaminants.

- **Alternatives 1 and 2** do not include treatment, therefore these alternatives will not result in a reduction in toxicity, mobility, or volume of contaminants.
- **Alternative 3** would result in a reduction in toxicity, mobility, and volume of contaminants through the removal of the dissolved petroleum in the water discharged from the OWS to the wetlands.

5. Short-Term Effectiveness - addresses the effects of the alternative on human health and the environment from the start of construction through the moment that the alternative is in place

and treatment goals are being met.

- **Alternatives 1 and 2:** the soil cap, seep collection drain are already in place but neither alternative can meet the treatment goals
- **Alternative 3** the short-term effectiveness is the same as for alternatives 1 and 2 but the installation of a filtration system will allow this alternative to meet treatment goals

6. Implementability - addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials.

- **Alternative 1** requires no actions.
- **Alternative 2** is technically feasible; activities for establishing ICs and maintaining and monitoring the landfill are standard engineering and property management activities and easily implemented.
- **Alternative 3** is technically feasible and there are several vendors available with the required experience and equipment to perform the proposed activities.

7. Costs - are calculated from estimates of capital and operation and maintenance costs. Capital costs consist of direct and indirect costs. Direct costs include the purchase of equipment, labor, and materials necessary to install the alternative. Indirect costs include engineering, financial, and other costs such as permitting and licensing. Annual operation and maintenance costs for each alternative include labor, maintenance materials, auxiliary materials, and energy.

- **Alternative 1** requires no action therefore there are no costs.
- **Alternative 2** consists of a present value cost of approximately $787,000
- **Alternative 3** consists of a present value cost of approximately $919,000.

8. State Acceptance - evaluates the issues and concerns of the state.

- The state has concurred with the Navy's proposed remedial action alternative (**Alternative 3**).

9. Community Acceptance - evaluates the issues and concerns of the community in terms of each alternative.

- **Alternatives 1, 2, and 3** will be evaluated for community acceptance and documented in the final ROD after the public comment period on the Proposed Plan.

PREFERRED REMEDIAL ACTION ALTERNATIVE

Three alternatives were developed and evaluated to address Site 1 impacts as follows:

- **Alternative 1** - no action.
- **Alternative 2** - continued implementation of maintenance and monitoring activities, and implementation of ICs.
- **Alternative 3** - continued implementation of maintenance and monitoring activities, implementation of ICs, and engineering controls on the water coming from the OWS.

Alternative 1 was not recommended because it does not meet either of the threshold criteria (overall protection of human health and the environment and compliance with ARARs).

Alternative 2 was not recommended because the petroleum concentrations in the water coming out of the OWS are above levels that are protective of the wetlands. Therefore, it does not either prevent receptors from potential exposure to petroleum-impacted water or comply with all identified ARARs.

Alternative 3 is preferred because it would protect human health and the environment and comply with all ARARs. This alternative would reduce the mobility, toxicity, and volume of petroleum in the water coming from the OWS, maintain the effectiveness of the soil cover, prevent exposure and disturbance of the landfill, prohibit the use of groundwater, and prevent a change in land use designation at Site 1.

ALTERNATIVE 3 IS THE PREFERRED REMEDIAL ACTION ALTERNATIVE BECAUSE…

Alternative 3 includes continued implementation of maintenance and monitoring activities, implementation of institutional controls, and engineering controls for water coming from the OWS. Alternative 3 is protective of human health and the environment and complies with environmental regulations or laws. This alternative also reduces the mobility, toxicity, and volume of petroleum in water coming from the OWS, maintains the effectiveness of the soil cover, prevents exposure and disturbance of the landfill waste, prohibits the use of groundwater, and prevents a change in land use designation.

GLOSSARY OF ACRONYMS AND TERMS

ARAR	Applicable or Relevant and Appropriate Requirement — The federal, state and local regulations and standards that must be used at this site for this cleanup action.
BRAC	Base Realignment and Closure
BCT	BRAC Cleanup Team
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act — A law that establishes a program to identify hazardous waste sites and procedures for cleaning up sites to be protective of human health and the environment, and evaluate damages to natural resources.
FS	Feasibility Study — A study to identify, screen and compare cleanup alternatives for a site.
IC	Institutional Controls — Restrictions on land use that limit activities, such as building or drilling wells. Institutional controls are implemented through codes, regulations, and legal documents that follow ownership of land (like deed restrictions for privately owned property).
Navy	U.S. Department of the Navy
NFD	Naval Fuel Depot
OWS	Oil/water separator
Present Value	The value today of some future dollar amount after it has been discounted for interest; for instance, at a 4.5% inflation rate, the present value of $15,000 ten years from now would be about $10,000.)
Preferred Alternative	The remedial alternative selected by the lead agency, in conjunction with the support agencies, that best satisfies the cleanup goal, based on the evaluation of alternatives presented in the FS.
Proposed Plan	A document that reviews the cleanup alternatives presented in the FS, summarizes the recommended cleanup actions, explains the reasons for recommending them, and solicits comments from the community.
RA	Remedial Action
RD	Remedial Design
ROD	Record of Decision — A decision document that identifies the cleanup alternative chosen for implementation at a Superfund site. The ROD is based on information from the RI and FS, and on public comments and community concerns
RWQCB	Regional Water Quality Control Board — A State of California environmental regulatory agency supporting EPA with oversight of environmental activities at Point Molate.
RAO	Remedial Action Objective — The cleanup goal that the proposed site cleanup is expected to accomplish.
RI	Remedial Investigation — An investigation during which the types , amounts, and locations of contamination at a site are identified.
UST	Underground storage tank

COMMUNITY PARTICIPATION

The Navy and RWQCB provide information regarding cleanup of Site 1 to the public through public fact sheets such as this, bi-monthly public meetings of the Restoration Advisory Board, information repositories for the site, and announcements published in the *West County Times*.

The Navy and RWQCB encourage the public to gain a more comprehensive understanding of the site and activities that have been completed by visiting the information repositories or attending the public meetings. The public can also join the mailing list to receive regular project information.

INFORMATION REPOSITORY LOCATIONS

Richmond Public Library
325 Civic Center Plaza
Richmond, California 94804
(510) 620-6561
Hours: M&Tu 3PM – 7PM;
W&Th 2PM – 6PM; F&Sat 1PM – 5PM

Richmond Redevelopment Agency
1401 Marina Way South
Richmond, California 94804
(510) 307-8140
Hours: M-F 8:30AM – 5PM
Point of Contact: Craig Murray

There are two ways for the public to participate and provide comments on this Proposed Plan:

1. **Public Comment Period – During the public comment period from July 21 to August 20, you may use the enclosed comment form to send written comments to Mr. Michael Bloom or Mr. Duane Rollefson at the address on the following page.**

2. **Public Meeting – You may also provide written or oral comments during the public meeting on August 4, 2004, that will be held at the Richmond Public Library at 6 PM. A stenographer will be at the meeting to record all public comments.**

NEXT STEP FOR SITE 1

After the public comment period, the Navy and RWQCB will review and consider the comments before making a final decision on the remedial action alternative at Site 1. The Navy's decision will be recorded as a ROD which will include all of the comments received on this Proposed Plan, as well as the Navy's responses. A Public Notice will be placed in the *West County Times* announcing when the ROD is available to the public in the information repositories.

MAILING LIST COUPON

If you would like to be included on the mailing list to receive information about environmental restoration activities at NFD Point Molate, please complete this coupon and mail to: Base Realignment and Closure, Attn: Michael Bloom, Navy Co-Chair, BRAC Environmental Coordinator, 1230 Columbia Street, Suite 1100, San Diego, CA 92101-8517.

☐ Add me to the NFD Point Molate Installation Restoration Program mailing list.

☐ Send me information on Restoration Advisory Board membership.

Name _____ Affiliation (optional) _____

Street _____

City _____ State _____ Zip Code _____

Telephone _____

Duane Rollefson, Remedial Project Manager
Naval Facilities Engineering Command, Southwest Division
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517

FOR MORE INFORMATION

If you have any questions about NFD Point Molate Site 1, please contact one of the following people.

NAVY

Contact: Duane Rollefson
Remedial Project Manager
Naval Facilities Engineering Command
Southwest Division
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517
Telephone: (619) 532-0957
Facsimile: (619) 532-0940
E-mail: duane.rollefson@navy.mil

NAVY

Contact: Michael Bloom
Navy Co-Chair,
BRAC Environmental Coordinator
Naval Facilities Engineering Command
Southwest Division
1230 Columbia Street, Suite 1100
San Diego, CA 92101-8517
Telephone: (619) 532-0967
Facsimile: (619) 532-0940
E-mail: michael.s.bloom@navy.mil

RWQCB

Contact: Adriana Constantinescu
CA Environmental Protection Agency
CA Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Telephone: (510) 622-2352
Facsimile: (510) 622-2460
E-mail: avc@rb2.swrcb.ca.gov

Project Web site: www.efdsw.navfac.navy.mil/Environmental/PointMolate.htm

Proposed Plan Comment Form
Site 1 Point Molate

The public comment period for the Proposed Plan for Site 1 at Point Molate is from July 21, 2004 though August 20, 2004. A public meeting to present the Proposed Plan will be held at the Richmond Public Library on August 4, 2004 at 6 pm. You may provide your comments verbally at the public meeting where your comments will be recorded by a court reporter. Alternatively, you may provide written comments in the space provided below. After completing your comments and your contact information, please fold and mail this form to the address provided on the reverse. All written comments must be postmarked no later than August 20, 2004. You may also submit this form to a Navy representative at the public meeting. Comments are also being accepted by e-mail; please address e-mail messages to michael.s.bloom@navy.mil.

Name: _____

Representing: _____

Phone Number: _____

Address: _____

Comments:

Don't forget to attend the Public Meeting for the Site 1 Proposed Plan; August 4th, Richmond Public Library, 6 pm.

Michael Bloom, BRAC Environmental Coordinator
Naval Facilities Engineering Command
Southwest Division
1230 Columbia St, Suite 1100
San Diego, CA 92101-8517

Don’t forget to attend the Public Meeting for the Site 1 Proposed Plan; August 4th, Richmond Public Library, 6 pm.